



Pacific Power |  
Rocky Mountain Power  
825 NE Multnomah, Suite 1800  
Portland, Oregon 97232

Electronically filed October 13, 2021

Kimberly D. Bose, Secretary  
Federal Energy Regulatory Commission  
888 First Street, NE  
Washington, D.C. 20426

**Subject: South Fork Pumped Storage Project  
Application for Preliminary Permit**

Dear Ms. Bose:

PacifiCorp is pleased to submit to the Federal Energy Regulatory Commission (Commission) the attached application for a preliminary permit for the proposed South Fork Pumped Storage Project (Project). PacifiCorp is submitting this application to secure and maintain priority of application for a license for the Project while undertaking the studies necessary to determine its feasibility.

This letter and its enclosures have been filed electronically. The security classification of each component in this packet is shown in the enclosure table. Should the Commission have any questions concerning these documents, please contact Tim Hemstreet by phone at (503) 813-6170, or by email at [tim.hemstreet@pacificorp.com](mailto:tim.hemstreet@pacificorp.com).

Sincerely,

Mark Sturtevant

Mark Sturtevant (Oct 13, 2021 08:53 PDT)

Mark A. Sturtevant  
Vice President, Renewable Resources

MAS:TH:BB

<b>Encl:</b>	Letter – Public
	Application for Preliminary Permit – Public
<b>eFile:</b>	Via eLibrary at <a href="http://www.ferc.gov">www.ferc.gov</a>

# **SOUTH FORK PUMPED STORAGE HYDROPOWER PROJECT**

## **APPLICATION FOR PRELIMINARY PERMIT**

### **INITIAL STATEMENT, GENERAL CONTENT, AND EXHIBITS 1 THROUGH 3**



October 2021

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## ACRONYMS AND ABBREVIATIONS

ac-ft—acre feet

BLM—Bureau of Land Management

CFR—Code of Federal Regulations

FERC—Federal Energy Regulatory Commission or Commission

FPA—Federal Power Act

ft—feet

GWh—gigawatt-hour

kV—kilovolt

LLC—limited liability corporation

msl—mean sea level

MW—megawatt

MWh—megawatt-hour

PLSS—Public Land Survey System

**INITIAL STATEMENT<sup>1</sup>****BEFORE THE FEDERAL ENERGY REGULATORY COMMISSION***APPLICATION FOR PRELIMINARY PERMIT*

(1) PacifiCorp (Applicant), a regulated electric utility privately held by Berkshire Hathaway Energy Company, applies to the Federal Energy Regulatory Commission (Commission or FERC) for a preliminary permit for the proposed South Fork Pumped Storage Project (Project), as described in the attached exhibits. This application is made in order that PacifiCorp may secure and maintain priority of application for a license for the Project under Part I of the Federal Power Act (FPA) while obtaining the data and performing the acts required to determine the feasibility of the Project and to support an application for a license.

(2) The location of the Project is:

State or territory:	Wyoming
County:	Lincoln County
Township or nearby town:	Kemmerer
Stream or other body of water:	Lake Viva Naughton, Hams Fork, near Fenn Creek, Trail Creek, Camp Creek, and Corral Creek

(3) The exact name and business address of the Applicant are:

PacifiCorp  
825 NE Multnomah, Suite 2000  
Portland, OR 97232

The exact name and business address of each person authorized to act as agent for the Applicant in this application are:

Tim Hemstreet, Managing Director, Renewable Energy Development  
PacifiCorp  
825 NE Multnomah, Suite 1800  
Portland, OR 97232  
Email: [Tim.Hemstreet@pacificorp.com](mailto:Tim.Hemstreet@pacificorp.com)  
Phone: (503) 813-6170

Dustin Till, Assistant General Counsel  
PacifiCorp  
825 NE Multnomah, Suite 2000  
Portland, OR 97232  
Email: [Dustin.Till@pacificorp.com](mailto:Dustin.Till@pacificorp.com)  
Phone: (503) 813-6589

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<sup>1</sup> 18 Code of Federal Regulations (CFR) §4. 81(a)

(4) The Applicant, PacifiCorp, is a domestic corporation and is not claiming municipal preference under section 7(a) of the FPA. PacifiCorp, a corporation located in Portland, Oregon, is organized under the laws of the State of Oregon and, as such, is qualified under § 4(e) of the FPA to hold hydroelectric licenses issued under Part I of the FPA.

(5) The proposed term of the requested permit is 48 months.

(6) The proposed pumped storage Project would use the waters within Lake Viva Naughton. Lake Viva Naughton is owned and operated by PacifiCorp. The reservoir is approximately 2.8 miles long and has a surface area of 1,500 acres and storage capacity of approximately 55,200 acre-feet (ac-ft) at maximum normal operating level. The regulated water levels reach 7,246 feet (ft) at full supply level. Construction of the Viva Naughton dam was completed in 1967. Construction of the FERC exempt 740-kW hydroelectric project at the dam was completed in 1986 (FERC Project No. 6509).

**GENERAL CONTENT<sup>2</sup>**

*(1) Identify every person, citizen, association of citizens, domestic corporation, municipality, or state that has or intends to obtain and will maintain any proprietary right necessary to construct, operate, or maintain the Project:*

PacifiCorp  
825 NE Multnomah, Suite 2000  
Portland, OR 97232

*(2) Identify (providing names and mailing addresses):*

*(i) Every county in which any part of the project, and any Federal facilities that would be used by the project, would be located:*

Lincoln County  
County Clerk  
925 Sage Avenue  
Kemmerer, WY 83101

*(ii) Every city, town, or similar local political subdivision:*

(A) In which any part of the project, and any Federal facilities that would be used by the project, would be located;

The Project would not be located within the boundaries of any city, town, or local political subdivision.

(B) That has a population of 5,000 or more people and is located within 15 miles of the project dam;

The Project would not be located within 15 miles of any city or town that has a population of 5,000 or more people.

*(iii) Every irrigation district, drainage district, or similar special purpose political subdivision:*

(A) In which any part of the project, and any Federal facilities that would be used by the project, would be located;

or

(B) That owns, operates, maintains, or uses any project facilities or any Federal facilities that would be used by the project;

There are no irrigation districts, drainage districts, or similar special purpose political subdivisions in which any part of the Project would be located. The Project would not use any Federal facilities.

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<sup>2</sup> 18 CFR §4. 32(a)



*(iv) Every other political subdivision in the general area of the project that there is reason to believe would likely be interested in, or affected by, the application:*

There are no other political subdivisions in the general area of the Project that there is reason to believe would be interested in, or affected by, the application.

*(v) All Indian tribes that may be affected by the project.*

Arapaho Tribe  
Wind River Agency  
Bureau of Indian Affairs  
PO Box 158  
Fort Washakie, WY 82514

Shoshone Tribe  
Wind River Agency  
Bureau of Indian Affairs  
PO Box 158  
Fort Washakie, WY 82514

**UNITED STATES OF AMERICA  
BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION**

PacifiCorp

)  
)  
)  
)

South Fork Pumped  
Storage Project

**SUBSCRIPTION AND VERIFICATION**

In witness whereof Applicant PacifiCorp has caused its name to be hereunto executed By Tim Hemstreet, PacifiCorp, Managing Director, Renewable Energy Development, this 8<sup>th</sup> day of October 2021.

State of Oregon  
County of Multnomah

PACIFICORP

by: Tim Hemstreet, Managing Director, Renewable Energy Development  
PacifiCorp  
825 NE Multnomah, Suite 1800  
Portland, OR 97232

being duly sworn, deposes and says that the contents of this Application for Preliminary Permit for the South Fork Pumped Storage Project are true to the best of his knowledge or belief. The undersigned Applicant has signed the Application this 8<sup>th</sup> day of October 2021.

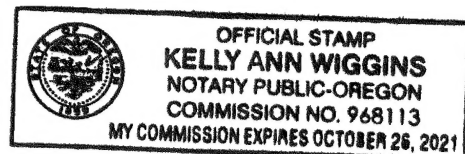
Tim Hemstreet

Tim Hemstreet, PacifiCorp, Managing Director, Renewable Energy Development

Subscribed and sworn to before me, a Notary Public of the State of Oregon this 26<sup>th</sup> day of October 2021.

Kelly A. Wiggins  
Kelly A. Wiggins, Notary Public

My Commission Expires 10/26/2021



## **EXHIBIT 1 PROJECT DESCRIPTION**

### **1.1 GENERAL PROJECT DESCRIPTION**

The proposed South Fork Pumped Storage Project (Project) is an open-loop, pumped-storage hydroelectric generating facility. It is PacifiCorp's intent with this application to evaluate the Project for its ability to meet current renewable energy system needs for energy storage.

The proposed Project would include:

- An upper reservoir with enough storage for operating 8 hours;
- A single powerhouse;
- Pumping/generating units with a maximum capacity of approximately 500 megawatts (MW);
- Lake Viva Naughton would be used as the lower reservoir;
- A penstock connecting the upper reservoir to Lake Viva Naughton; and
- A new transmission line connecting the powerhouse switchyard with the regional transmission grid.

### **1.2 RESERVOIRS**

The proposed Project would require the construction of a new upper reservoir and use existing Lake Viva Naughton as the lower reservoir. PacifiCorp has identified two alternative upper reservoir configurations for evaluation during the preliminary permit term.

#### **1.2.1 Lower Reservoir**

Under both alternatives, PacifiCorp intends to use the existing Lake Viva Naughton as the Project's lower reservoir. Lake Viva Naughton is impounded by Lake Viva Naughton Dam that was completed in 1960 and raised the normal water surface to its present elevation of 7,240 ft above mean sea level (msl) in 1967. The primary purpose of the reservoir is to provide cooling water to the Naughton Plant, which is located about 23 miles downstream. The reservoir is approximately 2.8 miles long, has a surface area of 1,500 acres, and a storage capacity of approximately 55,200 acre-feet (ac-ft) at maximum normal operating level. The regulated water levels reach 7,246 ft msl at full supply level. Construction of the FERC exempt 740-kW hydroelectric project at the dam was completed in 1986 (FERC Project No. 6509). There are no recreational resources or minimum flow requirements as part of the exemption. Although there are no public use facilities included in the exemption order for the Viva Naughton Project, there is a public marina (non-project) along the left (east) bank of the reservoir along U.S. Highway 189. PacifiCorp has provided public access requested by the Wyoming Department of Fish and Game and maintains a public rest room (non-project) near the left (east) abutment of the dam. PacifiCorp maintains safety and warning signs at the Project including a boat barrier upstream of

the spillway intake. PacifiCorp owns and operates the reservoir, dam, and hydroelectric facilities consistent with FERC regulations including a public safety plan, dam safety plan, emergency action plan, spill prevention and counter measure plan, vegetation maintenance control program, dam safety and surveillance monitoring and other seismic and hydrologic hazard analysis and reporting.

### **1.2.2 Proposed Upper Reservoir**

#### Alternative 1

Under Alternative 1, PacifiCorp would construct an upper reservoir at an approximate elevation of 8,650 ft msl. The upper reservoir would have a surface area of 210 acres and an operational storage capacity (based on 8 hours of generation) of approximately 3,348 ac-ft. The gross head would be approximately 1,400 ft.

#### Alternative 2

Under Alternative 2, PacifiCorp would construct an upper reservoir at an approximate elevation of 8,550 ft msl. The upper reservoir would have a surface area of 85 acres and an operational storage capacity of approximately 3,604 ac-ft. (based on 8 hours of generation). The gross head would be approximately 1,300 ft.

The preferable reservoir configuration and location will be determined during the preliminary permit term to maximize energy production relative to development within the terrain, geologic, and environmental constraints of the proposed Project area. The proposed layouts and site configurations in this Exhibit are the result of conceptual engineering studies.

### **1.3 EXISTING OR PROPOSED TRANSMISSION LINES**

An existing, PacifiCorp-owned, 345-kilovolt (kV) transmission line is located about 2 miles south of Lake Viva Naughton. PacifiCorp would construct a new substation to interconnect the pumped-storage Project to the regional grid in this location. Under Alternative 1, the transmission line to be constructed would be approximately 4.4 miles long; under Alternative 2, the transmission line to be constructed would be approximately 2.2 miles long (Exhibit 3).

The Project would connect to the Jim Bridger-Threemile Knoll 345-kV transmission line, which was constructed in 1970 and is part of the transmission system owned and maintained by PacifiCorp. This primary transmission line is currently maintained to FERC and North American Electric Reliability Corporation standards for system reliability.

### **1.4 GENERATING EQUIPMENT AND CAPACITIES**

#### **1.4.1 Generators**

The turbine and generator configurations have not been finalized at this time but could potentially be three 167-MW Francis pump-turbines units or a number of units that would be most efficient for the project.

### **1.4.2 Penstocks**

Penstocks would be constructed to convey water between the upper reservoir and the powerhouse at the lower reservoir. Depending on the final configuration, the penstock could trifurcate and deliver water to each of the three turbine units or maintain the single pipe layout to a single unit. PacifiCorp would construct a 4.2-mile penstock under Alternative 1 and a 3.8-mile penstock under Alternative 2.

### **1.4.3 Powerhouse/Pump Station**

The proposed powerhouse for Alternative 1 and Alternative 2 would have a generating capacity of approximately 500 MW and would be sited along the eastern shoreline of the lower reservoir. The powerhouse would be equipped with up to the three turbines for generation and three pumps to return water from the lower reservoir back to the upper reservoir via the penstock.

## **1.5 UPPER RESERVOIR SPILLWAY**

The Project would be an open-loop system that would exchange water between the new upper reservoir and the existing Viva Naughton lower reservoir. To reduce the risk associated with embankment overtopping, emergency freeboard would be maintained in the upper reservoir and redundant controls would be used. As a secondary measure, the upper reservoir would include an emergency spillway designed to pass the pumping flow rate without failing the embankment. The upper reservoir is off-channel and would not capture any precipitation from outside the impoundment.

## **1.6 AVERAGE ANNUAL ENERGY PRODUCTION**

The primary operational mode of this Project would be to support and balance PacifiCorp's system energy needs while allowing for the incorporation of additional variable renewable generation sources such as wind and solar. The Project would pump water from the lower reservoir during times when surplus energy from other resources is available and generate electricity during periods of high demand. Depending on customer energy demands and available energy production on PacifiCorp's system, the Project could pump and generate multiple times in a 24-hour period. Both Alternative 1 and Alternative 2 upper reservoirs would be sized to provide enough active storage for an 8-hour supply to the powerhouse. The installed capacity of the Project would be 500 MW, resulting in estimated annual energy production of 1,460 gigawatt-hours (GWh).

The gross available hydraulic head under proposed Alternative 1 as proposed would be 1,404 feet and 1,304 feet under Alternative 2. The daily output for both alternatives (based on a daily fill and run cycle) would be 4,000 megawatt-hours (MWh). The Project would have an anticipated 80% efficiency rating, so daily pumping energy needs (based on a daily fill and run cycle) would be 5,000 MWh.

## **1.7 LANDS OF THE UNITED STATES**

The proposed Project is located in Lincoln County, Wyoming. The locations identified by Public

Land Survey System (PLSS) township, range, and section of the lands of the United States within the proposed Project boundary are presented in Table 1, depicted in Exhibit 3, and identified in Form FERC-587 enclosed with this application.

**Table 1. PLSS location of lands of the United States within the proposed Project boundary**

<b>PLSS Township and Range</b>	<b>PLSS Section</b>	<b>Subdivision of Section</b>	<b>Acres</b>	<b>Agency Jurisdiction</b>
23N 116W	3	Gov Lots 3, 4, NW	157.1	BLM
23N 116W	4	Gov Lots 1, 2, 3, 4, NE, NW, SE, SW	631.1	BLM
23N 116W	5	Gov Lots 1, 2, 3, 4, NE, NW, SE, SW	627.7	BLM
23N 116W	6	Gov Lots 1, 2, 3, 4, 5, 6, NE, SE	424.1	BLM
23N 116W	7	Gov Lots 1, 2, 3, 4, NE, SE	429.1	BLM
23N 116W	8	NE, NW, SW	636.2	BLM
23N 116W	9	Gov Lots 1, 2, 3, NE, NW, SE, SW	601.3	BLM
23N 116W	16	Gov Lot 1, NW	78.3	BLM
23N 116W	17	NE, NW, SW	238.5	BLM
23N 116W	18	Gov Lots 1, 2, 3, 4, NE, SE	386.2	BLM
23N 116W	19	Gov Lot 1, NE	67.0	BLM
23N 117W	3	Gov Lots 7, 10	22.0	BLM
23N 117W	10	NW	39.9	BLM
23N 117W	15	Gov Lot 4	7.2	BLM
23N 117W	25	Gov Lots 2, SW	192.2	BLM
23N 117W	35	NE	39.7	BLM
23N 117W	36	Gov Lots 3, 4	15.1	BLM
24N 116W	15	NE, NW, SE, SW	479.0	BLM
24N 116W	21	NE, SE	320.4	BLM
24N 116W	22	NE, NW, SE, SW	638.7	BLM
24N 116W	27	NE, NW, SW	359.0	BLM
24N 116W	28	NE, SE, SW	399.2	BLM
24N 116W	31	Gov Lots 5, 6, 7, 8, NE, SE	389.0	BLM
24N 116W	32	NE, NW, SE, SW	439.6	BLM
24N 116W	33	NE, NW, SE, SW	638.5	BLM

<b>PLSS Township and Range</b>	<b>PLSS Section</b>	<b>Subdivision of Section</b>	<b>Acres</b>	<b>Agency Jurisdiction</b>
24N 116W	34	NW, SW	159.5	BLM
Total			8,415.6	

Note: BLM = Bureau of Land Management

No areas within or in the vicinity of the Project boundary labeled on Exhibit 3 are included or have been designated for study for inclusion in the National Wild and Scenic Rivers System.

No areas within the Project boundary labeled on Exhibit 3, have been: (1) designated as wilderness area; (2) recommended for designation as wilderness area; or (3) designated as wilderness study area.

## **1.8 REGIONAL WATER SOURCES**

The proposed Project is an open-loop, system that would circulate the same water between Viva Naughton reservoir and a newly constructed upper reservoir. Water would be required to initially construct and fill the upper reservoir, and over the long-term, minor amounts of make-up water would be required to account for losses due to evaporation and impoundment leakage. Water is anticipated to be sourced using a portion of the water rights currently held by the Applicant in the Hams Fork River for the Naughton power plant located near Kemmerer, Wyoming. During the study phase of the Project, the Applicant will create a water balance model for the Project and review existing water sources to determine if other supplemental sources would be required and if groundwater sources are available to make up for upper reservoir leakage.

## **1.9 PUBLIC INTEREST**

As a rate-regulated electric utility, PacifiCorp serves its customers under a cost-of-service model through which energy solutions are delivered for customers at prices that are below national and regional averages. PacifiCorp is the largest grid operator in the western United States and serves the energy needs of 2 million customers across six western states through owned and contracted energy resources. PacifiCorp shares a vision with its customers and communities in which clean energy from across the West powers jobs and innovation. Over the past several years, PacifiCorp has outlined an ambitious path to substantially increase its renewable energy capacity, evolve its existing portfolio, and connect supply with demand through an expanded, modernized transmission system.

The proposed Project would support the public interest by advancing PacifiCorp's capability to serve customers with clean, affordable and reliable energy service by providing renewable energy storage and carbon-free generation of electricity. Storage resources such as the proposed Project will be increasingly necessary to balance the increasing percentage of wind and solar resources on PacifiCorp's system with dynamic customer energy needs.



In addition to the ability of the Project to support progress towards a clean energy future, the proposed Project would create job opportunities during construction and support long-term operations and maintenance positions during the anticipated 50-year life of the facility. The investments in the project would also support the local community through an expanded tax base and sales and use taxes resulting from construction.

## **EXHIBIT 2 DESCRIPTION OF STUDIES**

### **2.1 STUDY PROCESS**

Prior to submittal of this preliminary permit application, PacifiCorp reviewed existing data sources and performed conceptual engineering analyses. PacifiCorp proposes to conduct the studies listed below to further evaluate the technical, economic, financial, and environmental feasibility of the proposed Project in support of an application for license.

These studies and analysis will provide critical inputs to the decision process to proceed with a Notice of Intent and a Preliminary Application Document.

The implementation of studies will be conducted in accordance with applicable federal and state permitting requirements. Studies will be conducted so as not to affect cultural resources and endangered species, and with only minor alterations to lands and waters. Any land altered or disturbed will be adequately restored. Any necessary permits or landowner permissions needed will be obtained prior to initiating the studies described here.

PacifiCorp's professional staff along with qualified third-party consultants will complete the preliminary studies described below. PacifiCorp staff and consultant support may include civil, mechanical, electrical, and geotechnical engineers; cultural resource and recreation professionals; biologists; visual resource professionals; hydrologists; and water quality professionals.

### **2.2 PRELIMINARY STUDIES TO BE COMPLETED**

#### **2.2.1 Cultural Resources**

A search of the State Historic Preservation Office database will be performed to identify previous cultural resource investigations and recorded sites within the Project study area. Information pertinent to the Project will be summarized, and a detailed review will be conducted to determine additional studies that may be appropriate. The cultural resource review will be coordinated with the State Historic Preservation Office, affected Indian tribes, and appropriate Federal agencies. Additional information on cultural resources in the Project study area may be provided by these entities. The results of the review will be used to prepare the discussion of resources and potential impacts, along with study plans that could be proposed in a Preliminary Application Document. If implementation of preliminary studies identified below results in ground disturbance, the ground-disturbing activity will be reviewed by a professional archaeologist for its potential to affect cultural resources. Field investigation and/or protection measures may be required before the ground-disturbing activity can proceed.

#### **2.2.2 Energy Needs and Economic Analysis**

An energy needs analysis of the proposed Project's ability to support variable renewable resources and contribute to balancing energy supply and demands will be performed. The analysis will include estimates of power production and renewable power integration. Long-term Project economics will be analyzed that will include cost data from other studies proposed in this

document. In addition, the Project may be evaluated in the Applicant's Integrated Resource Plan, which would evaluate the Project's ability to contribute to a least-cost, least-risk resource portfolio.

### **2.2.3 Engineering**

Preliminary engineering designs will be prepared for the powerhouse/pump station, upper and lower intake/outlet structures, upper and lower reservoirs, transmission lines, dam and dikes, and penstock/tunnels to determine the feasibility, estimated costs and construction timelines.

### **2.2.4 Fisheries Studies**

A literature review and annotated bibliography of existing fisheries studies and data will be prepared. This information will be used to prepare the discussion of resources and potential impacts, along with study plans that could be proposed in a Preliminary Application Document.

### **2.2.5 Sensitive Plants**

Plant communities will be delineated within areas potentially affected by Project development. In these same areas, surveys will be conducted for sensitive plants listed in State and Federal databases. This information will be used to prepare the discussion of resources and potential impacts, along with study plans that could be proposed in a Preliminary Application Document.

### **2.2.6 Terrestrial and Avian Species**

Wildlife habitat will be delineated within areas potentially affected by Project development. State and Federal databases will be queried to develop a list of potential threatened, endangered, or sensitive species potentially occurring in the Project area. This information will be used to prepare the discussion of resources and potential impacts, along with study plans that could be proposed in a Preliminary Application Document.

### **2.2.7 Water Quality**

A literature review and annotated bibliography of water quality studies and data sources for the site will be prepared. This information will be used to prepare the discussion of resources and potential impacts, along with study plans or modeling that could be proposed in a Preliminary Application Document.

### **2.2.8 Geotechnical**

A geotechnical evaluation will be completed to assess existing geological, seismic, aerial, and soil data. An analysis will be completed of the suitability of area soil and rock for use as construction material and as foundations. Additional borings, soundings, soil sampling, and laboratory testing of materials may be conducted as needed to inform preliminary engineering studies.

### **2.2.9 Land Survey**

A topographic and boundary survey of the proposed Project area will be completed. This information will be used to prepare the preliminary engineering plans and update the proposed Project boundary and land ownership information.

### **2.2.10 Recreation**

An assessment of recreation uses in the Project area and the potential Project effects on recreation will be prepared. This information will be used in the discussion of resources and potential impacts, along with study plans that could be proposed in a Preliminary Application Document.

### **2.2.11 Transportation**

An analysis of the area roadways and their capacity to support construction and operation of the Project will be completed.

### **2.2.12 Transmission Interconnection Study**

Consistent with the procedures outlined in Applicant's Open Access Transmission Tariff filed with FERC, transmission interconnection studies will be completed to determine the feasibility of interconnecting the proposed Project and any network upgrades that may be necessary, and their associated cost. The interconnection studies will determine the location, number of circuits, voltage, and configuration of the Project's interconnection with the regional utility network.

### **2.2.13 Visual Resources**

A baseline evaluation of existing visual resources at the Project site and from key observation points will be prepared. Visual simulations will be prepared from key observation points that incorporate Project structures including the powerhouse/pump station, transmission lines, dam, and upper reservoir. The visual simulations and the baseline will be used to identify preliminary issues or accommodations needed in the preliminary engineering work. This information will be used to prepare the discussion of resources and preliminary issues in a Preliminary Application Document.

## **2.3 ACCESS TO CONDUCT STUDIES**

No new road construction is proposed for the purpose of conducting the studies outlined in this document. If geotechnical and engineering studies proposed in this document require additional temporary access routes, those routes and their restoration will be coordinated with federal and state land managers in addition to any local landowners.

## **2.4 NEW DAM CONSTRUCTION**

PacifiCorp proposes construction of a new upper reservoir. As geotechnical and engineering work proceeds and the need for additional field investigations is identified, the Applicant will submit investigation plans to FERC and the landowner(s).

Information about field investigation will be submitted following the guidelines in 18 CFR §4.81 that require the following:

- (i) A description, including the approximate location, of any field study, test, or other activity that may alter or disturb lands or waters in the vicinity of the proposed project, including floodplains and wetlands; measures that would be taken to minimize any such disturbance; and measures that would be taken to restore the altered or disturbed areas; and
- (ii) A proposed schedule (a chart or graph may be used), the total duration of which does not exceed the proposed term of the permit, showing the intervals at which the studies, investigations, tests, and surveys, identified under this paragraph are proposed to be completed.

## 2.5 SCHEDULE FOR STUDIES

The schedule for completion of the studies outlined in this document is presented in the table below. It is the intent of PacifiCorp that these studies be completed along this timeline. This schedule assumes that a preliminary permit will be issued to PacifiCorp by January 1, 2022.

Preliminary Permit Issued by FERC	January 2022
Stakeholder Engagement and Performance of Studies	January 2022–June 2024
Complete Initial Environmental and Economic Analysis	July 2025
File Notice of Intent and Preliminary Application Document	January 2026

## 2.6 STUDY COSTS

The estimated costs of carrying out the scope of work described in Exhibit 2 is almost \$3.15 million, allocated as follows.

Study	Estimated Costs	Target Completion Date
Energy Needs and Economic Analysis	\$100K	July 2023
Geotechnical	\$500K	September 2024
Engineering	\$2M	June 2024
Land Survey	\$100K	July 2024
Cultural	\$50K	October 2024
Transmission Interconnection	\$200K	November 2024
Fisheries	\$75K	July 2025

<b>Study</b>	<b>Estimated Costs</b>	<b>Target Completion Date</b>
Water Quality	\$75K	July 2025
Recreation	\$50K	July 2025

## **2.7 FINANCIAL RESOURCES**

PacifiCorp will self-finance the studies, investigations, and consultation activities identified in this application.

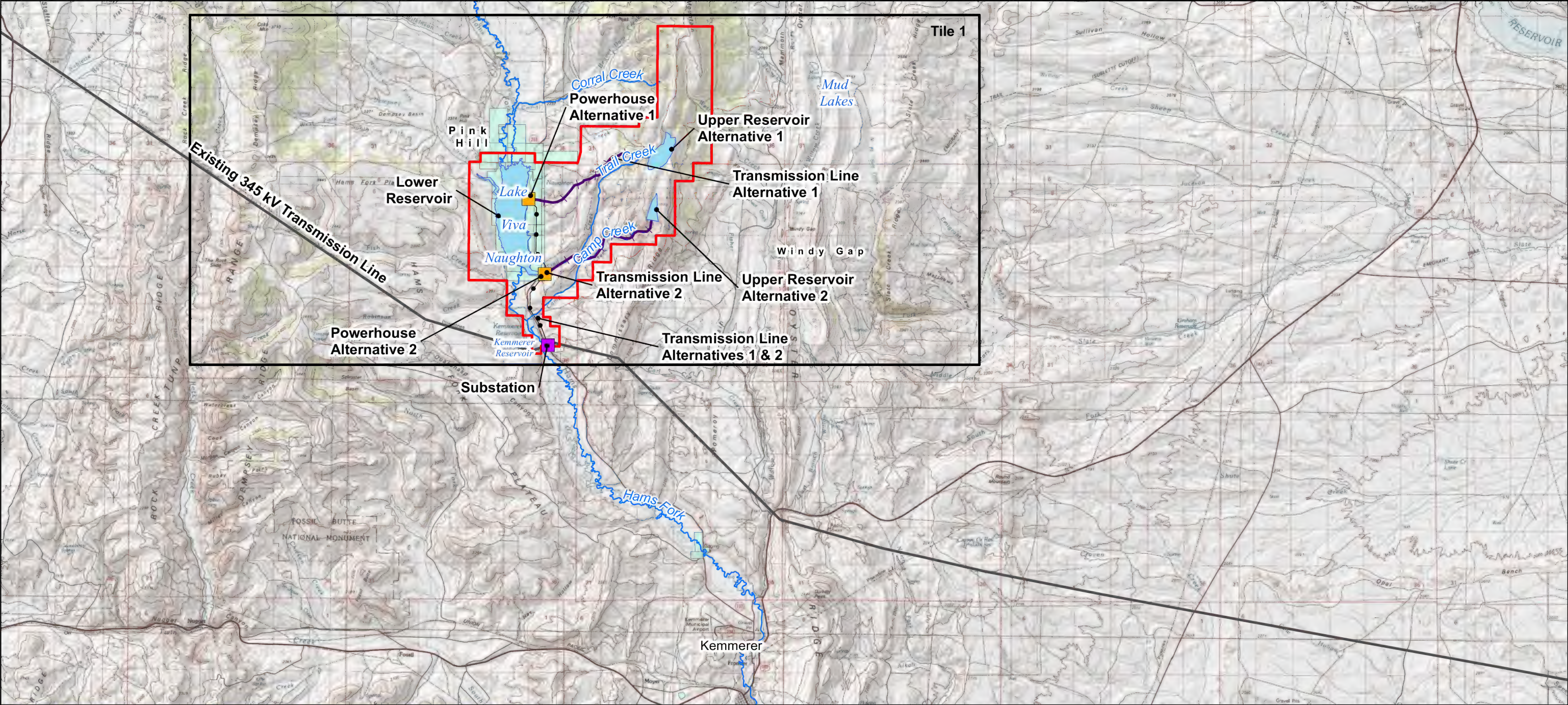
Revenues are generated by PacifiCorp through sales of electricity to wholesale and retail customers. Rates for retail energy sales are set by state public utility commissions in accordance with rate structures and public utility policies so that, in general, costs of service are covered by operating revenue. Operating revenue and energy costs are the key drivers of PacifiCorp's results of operations as they encompass retail and wholesale electricity revenue and the direct costs associated with providing electricity to customers. PacifiCorp's net income for the year ended December 31, 2020, was \$741 million on operating revenues of \$5.3 billion. PacifiCorp's operating revenue increased \$273 million for 2020 compared to 2019 due to higher retail revenue of \$250 million and higher wholesale and other revenue of \$23 million. For the same period, net income decreased by \$32 million for 2020 compared to 2019, primarily due to increased operation and maintenance expenses.

PacifiCorp's revenues are sufficient to meet the costs identified in this application. Additional financial data are presented in Berkshire Hathaway Energy Company's December 31, 2020, annual Form 10-K report available at: [https://www.brkenenergy.com/assets/upload/financial-filing/20201231\\_BHE%20Form%2010-K.pdf](https://www.brkenenergy.com/assets/upload/financial-filing/20201231_BHE%20Form%2010-K.pdf).

### EXHIBIT 3 PROJECT MAPS

Exhibit 3 must include a map or series of maps, to be prepared on United States Geological Survey topographic quadrangle sheets or similar topographic maps of a State agency, if available. *The maps need not conform to the precise specifications of §4. 39(a) and (b).*





**Legend**

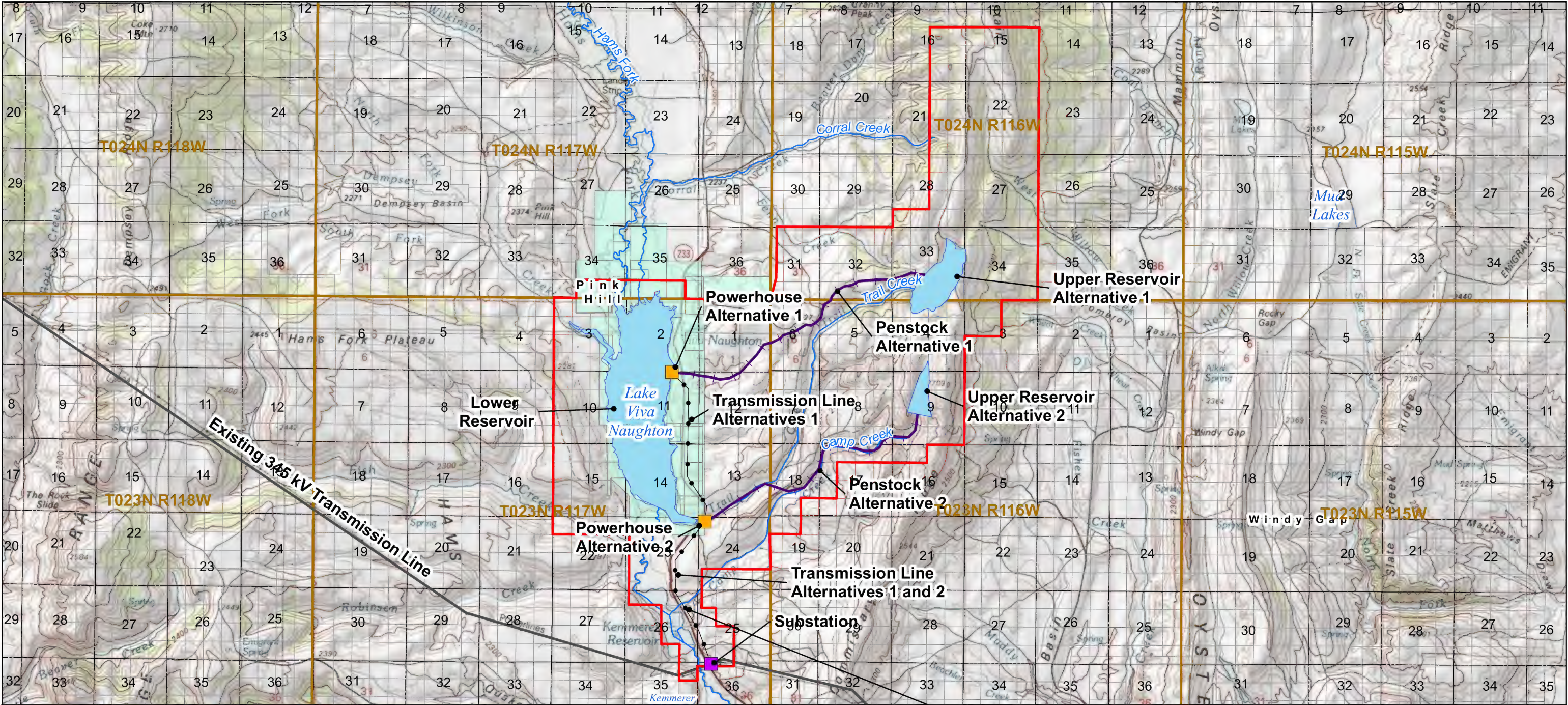
Project Boundary	PLSS Township	<b>Land Ownership</b>
<b>Project Features</b>	PLSS First Division	BLM
Reservoir	PLSS Second Division	USFS
Substation		NPS
Powerhouse		State
Penstock		Private
Transmission Line		PacifiCorp

### South Fork Pumped Storage Project Overview

0      3      6 Miles

1:170,000





**Legend**

Project Boundary

Project Features

Reservoir

Substation

Powerhouse

Penstock

Transmission Line

PLSSTownship

PLSS First Division

PLSS Second Division

Land Ownership

BLM

USFS

NPS


State

Private

PacifiCorp

### South Fork Pumped Storage

#### Tile 1



A BERKSHIRE HATHAWAY ENERGY COMPANY

0

1.5

3

Miles

1:85,000

N

E

S

W

Exhibit 3 Sheet2 of 2



**FERC Form 587**

**LAND DESCRIPTION****Public Land States  
(Rectangle Survey System Lands)**

1. STATE WY 2. FERC PROJECT NO. N/A  
 3. TOWNSHIP 23N RANGE 116W MERIDIAN Sixth

4. Check one:

       License  
  x   Preliminary Permit

Check one:

  x   Pending  
       Issued:                     

If preliminary permit is issued, give expiration date: not applicable

**5. EXHIBIT SHEET NUMBER OR LETTERS**

<b>Section 6</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
BLM Exhibit 3	BLM Exhibit 3	BLM Exhibit 3	BLM Exhibit 3		
<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>
BLM Exhibit 3	BLM Exhibit 3	BLM/State Exhibit 3			
<b>18</b>	<b>17</b>	<b>16</b>	<b>15</b>	<b>14</b>	<b>13</b>
BLM Exhibit 3	BLM Exhibit 3	BLM Exhibit 3			
<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>
BLM Exhibit 3					
<b>30</b>	<b>29</b>	<b>28</b>	<b>27</b>	<b>26</b>	<b>25</b>
<b>31</b>	<b>32</b>	<b>33</b>	<b>34</b>	<b>35</b>	<b>36</b>

6. Contact's name Tim HemstreetTelephone No. 503-813-6170Date submitted October 13, 2021

**LAND DESCRIPTION****Public Land States  
(Rectangle Survey System Lands)**1. STATE WY 2. FERC PROJECT NO. N/A3. TOWNSHIP 23N RANGE 117W MERIDIAN Sixth4. Check one:  
☐ License  
☒ Preliminary PermitCheck one:  
☒ Pending  
☐ Issued: \_\_\_\_\_If preliminary permit is issued, give expiration date: not applicable**5. EXHIBIT SHEET NUMBER OR LETTERS**

<b>Section 6</b>	<b>5</b>	<b>4</b>	<b>3</b> BLM/Private/ PacifiCorps Exhibit 3	<b>2</b> PacifiCorps Exhibit 3	<b>1</b> State/PacifiCorps Exhibit 3
<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b> BLM/Private/ PacifiCorps Exhibit 3	<b>11</b> PacifiCorps Exhibit 3	<b>12</b> State/PacifiCorps Exhibit 3
<b>18</b>	<b>17</b>	<b>16</b>	<b>15</b> BLM/Private/ PacifiCorps Exhibit 3	<b>14</b> Private/ PacifiCorps Exhibit 3	<b>13</b> State/PacifiCorps Exhibit 3
<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b> Private Exhibit 3	<b>23</b> Local Gov/Private/ PacifiCorps Exhibit 3	<b>24</b> State/Private/ PacifiCorps Exhibit 3
<b>30</b>	<b>29</b>	<b>28</b>	<b>27</b>	<b>26</b> Local Gov/Private Exhibit 3	<b>25</b> BLM/Private Exhibit 3
<b>31</b>	<b>32</b>	<b>33</b>	<b>34</b>	<b>35</b> BLM Exhibit 3	<b>36</b> BLM Exhibit 3

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<b>18</b>	<b>17</b>	<b>16</b>	<b>15</b>	<b>14</b>	<b>13</b>
		State Exhibit 3	BLM Exhibit 3		
<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>
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<b>30</b>	<b>29</b>	<b>28</b>	<b>27</b>	<b>26</b>	<b>25</b>
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BLM Exhibit 3	BLM/Private Exhibit 3	BLM Exhibit 3	BLM/State Exhibit 3		

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			Pacificorps Exhibit 3	Pacificorps Exhibit 3	

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Document Content(s)

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